



# *User's Guide*

*For diesel and gas vehicles equipped  
with a Transfer Flow MaxFlo-TFI™  
auxiliary fuel tank system.*

**tfi** **TRANSFER FLOW, INC.**  
The Leader in Aftermarket Fuel Tank Systems™

# Please Read Important Safety Information



## Filling the Fuel Tank

- Never fill a fuel tank near a flame or ignition source which might ignite the fuel vapors.
- Avoid breathing fuel vapors or allowing the fuel vapors or liquid to contact the skin.
- Always fill fuel tanks while the vehicle is on a flat surface with the engine **OFF**.
- Open the fuel cap slowly to allow any pressure to escape.
- Never overfill or “top-off” any fuel tank. Overfilling the tank may cause damage to the emissions system, cause dangerous spills and possibly result in a fire.
- Never siphon fuel using the mouth. This practice is dangerous and potentially fatal. Use an appropriate pump.
- Do not allow fuel to contaminate soil or waterways. Properly contain and dispose of spilled fuels and cleanup materials.

## Other Important Safety Information

- **Only use Transfer Flow replacement parts.** Many parts of our fuel system appear common, but are in fact special parts which are critical for safe operation. Contact Transfer Flow, Inc. for parts.
- Disconnect the battery before working on the fuel system.
- Only use gas or diesel in our auxiliary fuel systems.
- A maximum concentration of 20% biodiesel fuel is compatible with Transfer Flow fuel systems.
- Do not grind, torch, weld, cut, or modify a Transfer Flow fuel system.
- Never over pressurize a fuel tank.
- Do not sleep in the bed of the pickup with a camper shell that contains one of our in-bed fuel systems.
- **NEVER** connect a Transfer Flow fuel system to a previously modified fuel system without contacting Transfer Flow.
- Do not smoke near a fuel system.
- This fuel system is not to be used in any manner intended or in connection with aircraft.

# Understanding the Operation of the MaxFlo-TFI™ System

---

We'd like to introduce you to MaxFlo-TFI™, Transfer Flow's auxiliary operating fuel system. Please read this user's guide to better understand MaxFlo-TFI™. We hope you enjoy your Transfer Flow auxiliary system!

## ***What is included in a MaxFlo-TFI™ auxiliary system?***

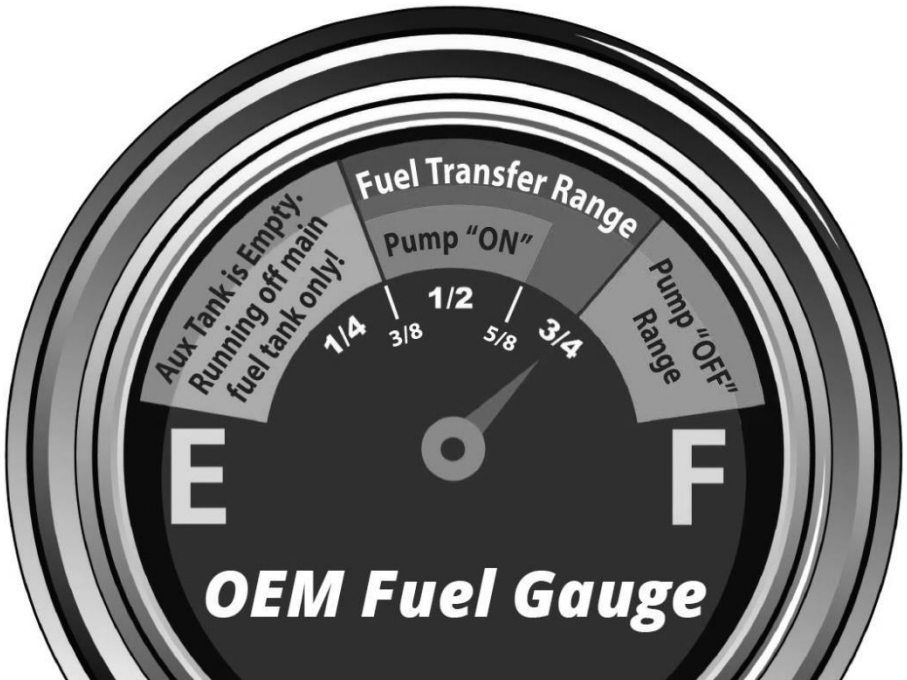
The MaxFlo-TFI™ auxiliary system includes an auxiliary tank, an auxiliary fuel pump, a wire harness, all necessary fuel lines, and mounting hardware for a complete installation. Also included is the MaxFlo-TFI™ computer controlled module.

## ***How does the MaxFlo-TFI™ auxiliary system operate?***

The MaxFlo-TFI™ auxiliary system feeds fuel into the vent tube of the original equipment manufacturer (OEM) tank by way of the Transfer Flow computer controlled fuel pump. The stock MaxFlo-TFI™ computer controlled module is completely automatic. **It is NOT a dash mounted display or switch.\*** As the vehicle consumes fuel from the OEM tank, the MaxFlo-TFI™ auxiliary system automatically pumps fuel into the OEM tank until the OEM tank reaches 3/4 of a tank. If the user drives an extended time without refueling, the auxiliary system will start to run low on fuel. At which point the OEM gauge will fall below 3/8 of a tank indicating the auxiliary system is finally empty.

\*See page 6 for information on the dash-mounted Digital Lightbar upgrade kit, which includes an auxiliary fuel gauge and pump power button.

**Figure 1: OEM Fuel Gauge Operation**



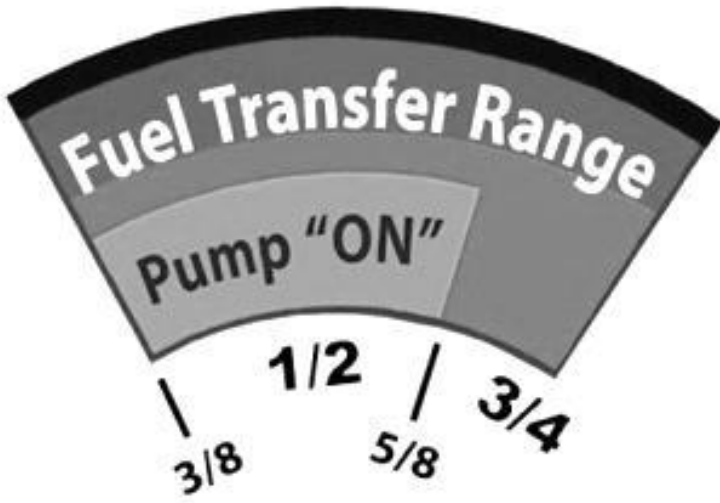
“Fuel Transfer Range” indicates when fuel will be transferred from the auxiliary tank to the OEM fuel tank.

### ***How often does the MaxFlo-TFI™ auxiliary system fill the OEM fuel tank?***

The MaxFlo-TFI™ computer module monitors the fuel level in the OEM fuel tank. When the fuel level on the OEM fuel gauge reads approximately 1/2, between 3/8 and 5/8 of a tank (see Figure 1), the MaxFlo-TFI™ auxiliary system will automatically start the transfer of fuel to the OEM tank. The auxiliary pump will continue to transfer fuel until the OEM fuel gauge registers 3/4 of a tank. This process is repeated until the auxiliary tank is empty.\*

\*When stopping to refuel, always fill the OEM fuel tank first, and be sure the capacity is past 3/8 of a tank. If the OEM fuel tank is not filled within “Fuel Transfer Range” (Figure 1) then there is a chance that the auxiliary tank will not transfer fuel.

**Figure 2: Fuel Transfer Range Within the OEM Gauge**



Fuel transfer range is subject to change based on many different factors. **As long as the OEM gauge is registered between 3/8 and 5/8 of a tank, then the MaxFlo-TFI™ system will operate correctly.**

***What do I need to do to operate the MaxFlo-TFI™ fuel system?***

The operation of the MaxFlo-TFI™ computer module is transparent to the user. **There is not a dash mounted display or switch.** Instead, the computer module is mounted under the auxiliary tank cover box. When the user keys on the vehicle, the system will automatically start working and pumping fuel if the OEM fuel gauge is in "Fuel Transfer Range" (Figure 2).

## ***Why does Fuel in the OEM tank need to be more than 3/8 of a tank for the auxiliary system to operate correctly?***

Keeping the OEM tank above 3/8 will ensure that the MaxFlo-TFI™ auxiliary system will operate correctly. If the OEM tank is below 3/8 of a tank there is a chance that the “Fuel Transfer Range” (Figure 1 and 2) will not be recognized by MaxFlo-TFI™. The system will read as if the auxiliary tank is empty and the fuel in the auxiliary tank will not be transferred.

## ***Example of operation for the MaxFlo-TFI™ auxiliary system:***

The user is driving down the road with a full OEM tank and also a full MaxFlo-TFI™ auxiliary tank. After driving for some time, the OEM fuel tank is at 1/2 capacity and in “Fuel Transfer Range” (Figure 1 and 2). The MaxFlo-TFI™ auxiliary pump turns on and transfers fuel into the OEM tank until the OEM gauge reads 3/4 of a tank again.

As the user continued to drive down the road, the system continued to transfer fuel whenever the OEM gauge is in “Fuel Transfer Range”.

After driving for an extended time, the user now notices the OEM gauge is at 3/8 of a tank. The OEM gauge is now out of “Fuel Transfer Range” so the user knows that the auxiliary tank is empty, and decides to stop to refuel.

The user decides to only refuel the MaxFlo-TFI™ auxiliary tank, and not fill his OEM tank that is at 3/8 of a tank. The user gets back on the road, but notices that the MaxFlo-TFI™ auxiliary system is not transferring fuel back into the OEM tank. The user remembers that when the OEM gauge is below the “Fuel Transfer Range” The MaxFlo-TFI™ auxiliary system will not pump fuel. At the next stop the user fills the OEM tank from 3/8 to 1/2 of a tank. The MaxFlo-TFI™ system now is in “Fuel Transfer Range” and operates correctly.

# Monitoring the Fuel System

---

## ***How can I determine the fuel level of my MaxFlo-TFI™ fuel system?***

The user has a few ways of determining the fuel level and status of the MaxFlo-TFI™ auxiliary system.

**First:** When the fuel level on the OEM fuel gauge reads approximately 1/2, between 3/8 and 5/8 of a tank (see Figure 1), the MaxFlo-TFI™ auxiliary system will transfer fuel to the OEM tank. When the OEM fuel gauge registers below 3/8 of a tank, all fuel has been emptied from the auxiliary tank and only 3/8 of a tank is remaining in the OEM fuel tank.

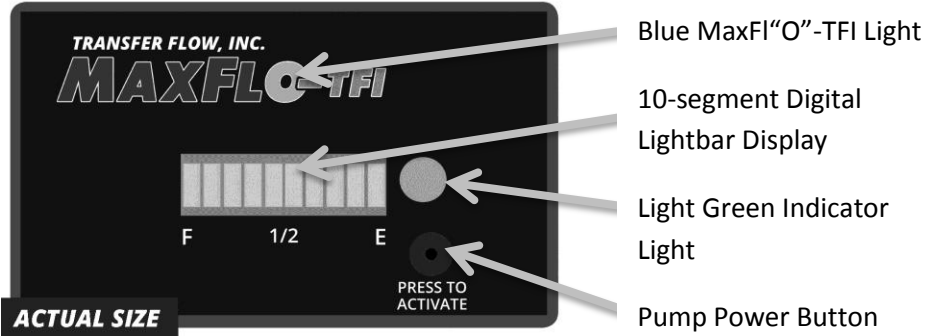
**Second:** By monitoring vehicle mileage, the user can obtain a more accurate picture of the total remaining fuel. With the help of the odometer and the added capacity achieved with the auxiliary tank, the user can estimate the remaining fuel in the auxiliary tank.

**Third:** Upgrade to our MaxFlo-TFI™ dash-mounted Digital Lightbar upgrade kit. See page 6 for information on this upgrade kit.

## Part 3

# Digital Lightbar Upgrade Kit

### Understanding the Digital Lightbar upgrade kit:



The dash-mounted Digital Lightbar upgrade kit will allow the user to see how much fuel is in the auxiliary tank, while also being able to have control over starting or stopping pumping cycles. **The principles outlined in Part 1 and 2 of when the auxiliary system will automatically pump fuel into the OEM tank will not change.** The Digital Lightbar upgrade kit will maintain the same automatic operating system from MaxFlo-TFI™. The user does not **NEED** to push any buttons to have the system operate correctly, but the user does have the control to start or stop a pumping cycle if they desire.

**NOTE:** The auxiliary fuel gauge on the Digital Lightbar upgrade kit is programmed to be independent of the MaxFlo-TFI™ module. This is relevant to the user because the system still will not pump fuel if the OEM fuel gauge is below 3/8 of a tank and out of the “Fuel Transfer Range” (See Figure 2 on page 4). In this case, the user would simply press the pump power button to start a pumping cycle.

### Blue MAXFL“O”-TFI™ Light:

The “O” in the MaxFlo-TFI™ logo illuminates blue to signify when the pump is running as well as other key module functions listed in the table below.



### **Digital Lightbar Display:**

From right (E), to left (F), the Lightbar display consists of ten illuminated bars; three red, four orange, and three green. The following bars will be illuminated to signify different fuel levels:

- **FULL:** 3-red, 4-orange, 3-green
- **HALF:** 3-red, 2-orange
- **EMPTY:** 1-flashing red

**NOTE:** When in direct sunlight it can be difficult to see the illuminated segments of the Digital Lightbar Display.

### **Light Green Indicator Light:**

This light will illuminate to indicate the pump power button is pressed.

### **Pump Power Button:**

This button controls the pump. It can transfer fuel from the auxiliary tank to the OEM tank on demand, as long as the OEM gauge reads below 3/4.

### **Initial System Startup:**

**NOTE:** The initial system start up, when on a level surface, is the best time to check the fuel level in the auxiliary tank. Once the fuel level of the auxiliary tank is known, it is not necessary for the user to continually check the Lightbar auxiliary gauge.

1. When keying on the vehicle, the Lightbar will start to show how much fuel is in the auxiliary tank as the bars gradually light up from right to left.
2. About 10 seconds after keying on the vehicle, the blue light behind the "O" in MAXFLO-TFI™ will illuminate simultaneously as the pump **PULSES** three times.
3. If the OEM tank is below 3/4, the fuel pump will begin to automatically transfer fuel. While the pump is **ON**, the blue "O" will illuminate with a small pause every 10 seconds. If the button is pressed when the tank is above 3/4, the pump and light will **PULSE** but will not turn on completely to prevent overfilling.

4. When the pump is **ON**, it is possible to press the pump power button for 4-6 seconds to turn the pump **OFF**. The green indicator light above the button will illuminate green to indicate button is pressed.
5. Pump will remain **OFF** until the vehicle is turned off then keyed back on, or if the system is **RESET**.

### **MaxFlo-TFI™ Digital Lightbar Function Table:**

<b>Function</b>	<b>Action</b>	<b>Description</b>	<b>MaxFlo “O” light</b>
<b>*Pump ON</b>	Hold button down for 2-3 seconds	The blue “O” light illuminates. While the pump is running, the light will briefly pause every 10 seconds.	“O” continually illuminates
<b>Pump OFF</b>	Hold button down for 4-6 seconds	The system will remain <b>OFF</b> until the vehicle is keyed off and back on, or the system is <b>RESET</b>	“O” will turn OFF
<b>**System RESET</b>	Hold button down for 14-16 seconds	The system will <b>RESET</b> , restoring the system to normal monitoring and pumping functions.	“O” will pulse 4 times

\*If the user tries to manually turn **ON** the system when the OEM gauge is at or above 3/4, the pump and light will **PULSE** but will not turn on completely to prevent overfilling.

\*\*After a system **RESET**, allow 50 - 60 seconds for the system to start-up before attempting to manually turn the pump **ON**.

**[WARNING]** To prevent distraction, always pull your vehicle over to start or stop pumping cycles.

# Frequently Asked Questions

---

## ***Do I need to buy a new Transfer Flow auxiliary fuel system when I get a new vehicle?***

MaxFlo-TFI™ is available for use on most Dodge, Ford and GM diesel pickups, and select gas models. If you purchase a new full-size vehicle, contact our sales team right away. Transfer Flow has kits available for the MaxFlo-TFI™ auxiliary system that will utilize the parts currently in use now, while also upfitting the auxiliary system to the latest specifications for the new vehicle.

## ***How often should I replace the fuel filter in my MaxFlo-TFI™ Auxiliary Fuel System?***

### **After initial installation of an auxiliary fuel system:**

The fuel filter should be replaced within 3-6 months

### **Routine Replacement:**

Transfer Flow recommends that the filter be replaced every 12 months on vehicles that see normal service. If the vehicle is operated in dusty conditions or driven more than 20,000 miles per year, the filter should be changed every 4 months. Please note that vehicles traveling outside the United States and Canada may be exposed to filling stations that contain elevated levels of contaminants, it may be wise to carry spare filters when traveling outside of the country. **NOTE:** Auxiliary fuel systems purchased prior to 2009 do not have fuel filters.

***In extremely cold conditions my fuel is gelling.***

***How can I fix it?***

See “Filter Interchange” below. Changing to the specified filter will prevent fuel gelling from affecting the fuel system.

**Filter Interchange:**

**Routine:** FRAM G3, WIX 3303, NAPA 3003, TFI 070-FL-32861

**Extreme cold or Biodiesel up to (B20):** NAPA filter 3270.

***How long does the auxiliary pump take to fill the OEM tank?***

Our low-flow pumps will transfer fuel at a rate of 1 gallon every 3 minutes. Under normal driving conditions it will take approximately 20 - 25 minutes before the OEM tank reaches 3/4 full. Conditions such as fuel efficiency and OEM tank capacity will greatly affect how long the auxiliary pump will run.

***If the MaxFlo-TFI™ system develops a problem can my vehicle still be driven until it is fixed?***

There are two ways to disable the auxiliary fuel system so the vehicle will operate from the OEM tank only, just as though the Transfer Flow auxiliary system was never installed.

1. Locate the fuse holder in the MaxFlo-TFI™ wire harness, which is usually located in the OEM fuse box. Remove the fuse.
2. Remove the tank cover box that rests on top of the auxiliary fuel tank, or inside our tool box tank. Unplug the 3-pin connector with red and black wire.

## Monitoring the MaxFlo-TFI™ Module:



7-segment display

Pump LED light:

**GREEN:** system is on

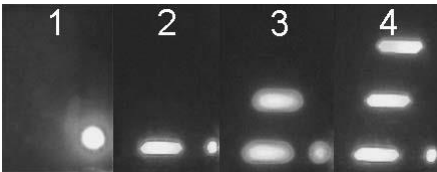
**RED:** pump is on

**ORANGE:** module unplugged from pump

Product information

Reading the 7-segment display:

1. Empty to 3/8
2. 3/8 to 1/2
3. 1/2 to 3/4
4. 3/4 to full



## MaxFlo-TFI™ Computer Module Start Up Process:

Time after starting vehicle	7-Segment Display	Module LED	Description
0-16 Seconds	M-A-X-F-L-O DATE SERIAL #	GREEN	One by one the display reads out MaxFlo, the date, then serial #
16-18 Seconds	BLANK	Flashes RED 3 times	Pump pulses simultaneously with the Red LED
18-46 Seconds	BLANK with RED DOT at 29 SEC	GREEN	Program cycles
47+ Seconds	FUEL LEVEL/RED DOT	GREEN	Reads fuel level

## Important Notice - Transfer Flow Replacement Parts

Transfer Flow, Inc. fuel systems are designed to work only with specific components which have been selected for their unique properties. Years of design work have produced the finest auxiliary fuel system available! This system relies on relatively few but critical parts. The used in the Transfer Flow, Inc. fuel systems are not generic or “off-the-shelf” parts and cannot be replaced with parts that appear to be similar.

For example, the in-line fuel pump used with our MaxFlo-TFI™ system appears to be a normal fuel pump, but it is actually a high quality solenoid pump with a critical forward and reverse check feature. **Under no circumstances should any other pump be substituted for this pump.**

This auxiliary fuel system has been outfitted with a replaceable fuel filter that requires periodic service. If the tank was purchased prior to 2009 there is a chance that the auxiliary tank does not have a fuel filter.

The filter is available through automotive parts retailers and is not covered by Transfer Flow, Inc.’s warranty. The filter should be inspected/replaced every 4-12 months depending on the conditions that the vehicle is operated in and the quantity of fuel purchased. Transfer Flow, Inc. will not honor warranty claims for diagnosis or replacement of obstructed filters.

### **24-hour technical help:**

If your Transfer Flow fuel system fails to operate properly or if you have any questions regarding part replacement contact Transfer Flow immediately at **(530) 893-5209** or **1-800-442-0056**.

# CERTIFICATE OF LIMITED WARRANTY

## 1. Three Year/Unlimited Mile Warranty

TRANSFER FLOW, INC. ("TFI") fuel systems and parts are - EXCEPT AS NOTED IN PARAGRAPHS 2, 3, AND 4 BELOW - covered by a three year unlimited mile warranty against defects in material and workmanship. This warranty is in effect in the United States and Canada from the date the unit is purchased by the Original Purchaser ("Original Purchaser" shall mean the person who purchases for his own use).

## 2. Specific Parts Warranty

Specific parts purchased from TFI are warranted against defects in material and workmanship as follows:

- Sending units are covered by a one year warranty from the date of purchase by the Original Purchaser.
- 12-volt refueling pumps are covered by a two year warranty from the date of purchase by the Original Purchaser (AND ARE NOT TO BE USED FOR AVIATION FUEL).
- Spray-on bedliners are covered by a three year warranty from the date of installation for the Original Purchaser.

## 3. Exclusions And Limitations

THE TFI WARRANTY, DESCRIBED IN PARAGRAPHS 1 AND 2 ABOVE, IS SUBJECT TO THE FOLLOWING EXCLUSIONS AND LIMITATIONS:

- The rights of the Original Purchaser under the TFI warranty are LIMITED to return of the goods and repair or replacement of nonconforming goods.
- THIS WARRANTY DOES NOT COVER INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO: LOSS OF USE OF THE WARRANTED PRODUCT, LOSS OF TIME, INCONVENIENCE, TRANSPORTATION EXPENSES, TOWING, EXPENSES FOR TRAVEL, LODGING, TELEPHONE AND GASOLINE, LOSS OR DAMAGE TO PERSONAL PROPERTY OR LOSS OF REVENUE. NOTE: SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.
- Warranties will only cover products on which the identification label is affixed; if the label has been removed or defaced, the warranty is no longer valid.
- TFI fuel systems are compatible with a maximum 20% concentration of biodiesel fuel manufactured ASTM D7467 specifications. Concentrations above 20% or failing to comply with ASTM D7467 specifications will void warranty.
- THE WARRANTY PROVIDED IN PARAGRAPHS 1 AND 2 ABOVE IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES (EXPRESS, IMPLIED, OR OTHERWISE) INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN THE EVENT IMPLIED WARRANTIES MAY NOT BE EXCLUDED, THE TERM OF ANY IMPLIED WARRANTY SHALL NOT EXCEED THE TERM OF THE APPLICABLE EXPRESS WARRANTY PROVIDED IN PARAGRAPHS 1 AND 2 ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.
- The warranty will not apply when product failure is caused by conditions beyond the control of TFI, such as:
  - (1) Malfunction due to incorrectly ordered product
  - (2) Damage from misuse, negligence, or failure to provide reasonable and necessary maintenance
  - (3) Damage caused by improper installation
  - (4) Damaged caused in shipment or improper handling
  - (5) Damage caused by contaminated fuels or fuel additives
  - (6) Product modification or alteration
- Products made from pickled and oil material are not covered under warranty for corrosion.
- The in-line fuel filter provided with the TFI fuel system is not covered by warranty as it is a standard maintenance item.
- Any action against TFI for breach of the warranty must be commenced within one (1) year after the cause of action has accrued.
- Any action against TFI for breach of the warranty must be commenced in the Superior Court of Butte County, State of California.

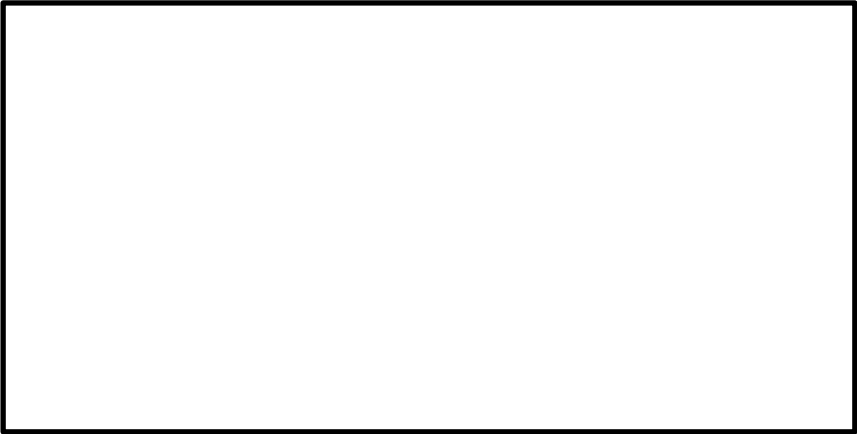
## 4. Warranty Claim Procedures

- If you have difficulty with your fuel system, consult the dealer where the unit was originally purchased. Your dealer will then contact TFI and request assistance. TFI will require model, part and serial numbers, proof of purchase, and date of installation. TFI reserves the right to examine the claimed defect in the field or upon return of the tank or component to TFI's facility with all shipping charges being prepaid. If a part is defective and must be replaced, TFI will provide a Returned Merchandise Authorization ("RMA") number, authorization, and instructions for replacement or further handling.
- No payment will be made for parts purchased or repaired in the field without prior authorization by TFI.
- TFI will pay its established warranty labor rates to service points or service dealers who have service agreements with TFI.
- If an item is shipped as a replacement for a defective part, a charge will be made for this part. Credit will be considered upon return of the defective item. ALL RETURNED ITEMS MUST BE IDENTIFIED WITH THE RMA NUMBER AND RETURNED WITHIN 30 DAYS OF OPENING THE CLAIM.

## 5. Federal Regulatory Provisions

This warranty gives you specific legal rights, and you may also have other rights which vary from State to State, and in accordance with specific federal regulations. TFI does not authorize any person to create for TFI any other obligation or liability in connection with TFI fuel systems. If TFI fails to successfully perform its obligation under this warranty, the Original Purchaser has available the remedies provided by the Magnuson-Moss Warranty Act (P.L. 93-637) and any applicable state law.

**DO NOT REMOVE THIS LABEL**



## **Important Label Information**

If you are experiencing any problems with your Transfer Flow auxiliary fuel tank system, please call **1-800-442-0046** prior to any repairs being done! Please refer to the information found on this label when calling for technical support.



1444 Fortress Street, Chico, California 95973

(530)893-5209 • 1-800-442-0056

FAX: (530)893-0204

[www.transferflow.com](http://www.transferflow.com)

**TFI Part # 070-IS-33566**